

AMENDMENTS TO THE SPECIFICATION

Please amend the paragraph beginning on line 23 of page 1 as follows:

B1
The blocking artifact is a phenomenon in which the edges of a block sharply look like a tile. This phenomenon is caused by ~~that~~ an image signal in a block that has only low frequency components, and the values of the frequency components differ from those of adjacent blocks.

Please amend the paragraph beginning on line 3 of page 2 as follows:

B2
The ringing artifact is a phenomenon in which flicker occurs in the vicinity of the edges of a block as if mosquitoes are flying. This phenomenon is caused by ~~that~~ high frequency components possessed by an image signal that are lost in the quantization process.

Please amend the paragraph beginning on line 9 of page 3 as follows:

B3
According to a first aspect of the present invention, an image processing method comprises a noise detection step of performing noise detection on an image; a noise removal step of removing noise from a predetermined region of the image, on the basis of the result of the noise detection; an arithmetic step of obtaining the ratio of an area targeted for noise removal to the predetermined region of the image, on the basis of the result of the noise detection; and an image generation step of generating an image indicating the ratio, on the basis of the ratio obtained in the arithmetic step. Therefore, when noise removal is performed on an image, the viewer can easily know the ratio of pixels subjected to noise removal.

Please amend the paragraph beginning on line 21 of page 3 as follows:

B4
According to a second aspect of the present invention, an image processing method comprises a noise detection step of performing noise detection on an image; a noise removal step of removing noise from a predetermined region of the image, on the basis of the result of the noise detection; an arithmetic step of obtaining the ratio of an area targeted for noise removal to the predetermined region of the image, from the result of the noise detection; a statistics calculation step

B4
noise

of obtaining the statistics on the ratios obtained in the arithmetic step over a predetermined period of time; an image generation step of generating an image indicating the statistics, on the basis of the statistics obtained in the statistics calculation step; and an image composition step of superimposing the image generated in the image generation step on the image before being subjected to noise removal in the noise removal step or on the image from which noise has been removed, to generate a composite image for display. Therefore, when noise removal is performed on an image, the viewer can easily know the ratio of pixels subjected to noise removal, for every predetermined period of time.

Please amend the paragraph beginning on line 15 of page 4 as follows:

B5

According to a third aspect of the present invention, an image processing method comprises a noise detection step of detecting the position and intensity of noise in an image; a noise removal step of removing noise from a predetermined region of the image, on the basis of the position and intensity of noise detected in the noise detection step; an arithmetic step of obtaining, for each intensity level of noise, the ratio of an area targeted for noise removal to the predetermined region of the image, on the basis of the position and intensity of noise detected in the noise detection step; and an image generation step of generating an image indicating the ratio for each intensity level of noise, on the basis of the ratio obtained in the arithmetic step. Therefore, when noise removal is performed on an image, the viewer can easily know how much noise is removed, for each intensity level of noise, whereby the user interface is improved.

Please amend the paragraph beginning on line 6 of page 5 as follows:

B6

According to a fourth aspect of the present invention, an image processing method comprises a noise detection step of performing detection of position and intensity of noise, on an image; a noise removal step of removing noise from a predetermined region of the image, on the basis of the position and intensity of noise detected in the noise detection step; an arithmetic step of obtaining, for each intensity level of noise, the ratio of an area targeted for noise removal to the predetermined region of the image, on the basis of the position and intensity of noise detected in the noise detection

B6
cancel

step; a statistics calculation step of obtaining, for each intensity level of noise, the statistics on the ratios obtained in the arithmetic step over a predetermined period of time; an image generation step of generating an image indicating the statistics, for each intensity level of noise, on the basis of the statistics obtained in the statistics calculation step; and an image composition step of superimposing the image generated in the image generation step on the image before being subjected to noise removal in the noise removal step or on the image from which noise has been removed, to generate a composite image for display. Therefore, when noise removal is performed on an image, the viewer can easily know how much noise is removed for each intensity level, for every predetermined period of time, whereby the user interface is improved.

B7

Please amend the paragraph beginning on line 4 of page 6 as follows:

According to a fifth aspect of the present invention, an image processing method comprises a noise detection step of detecting the position and intensity of noise in an image; a noise removal step of removing noise from the image, on the basis of the position and intensity of noise detected in the noise detection step; an image generation step of generating an image indicating pixels included in an area of the image targeted for noise removal, using a predetermined color according to the intensity of noise, on the basis of the position and intensity of noise detected in the noise detection step; and an image composition step of superimposing the image generated in the image generation step on the image before being subjected to noise removal in the noise removal step or on the image from which noise has been removed, to generate a composite image for display. Therefore, when noise removal is performed on an image, the viewer can easily know the position of pixels subjected to noise removal as well as how much noise is removed.

B8

Please amend the paragraph beginning on line 21 of page 6 as follows:

According to a sixth aspect of the present invention, an image processing method comprises a noise detection step of detecting noise in an image; a noise removal step of removing noise from the image on the basis of the result of the noise detection; and an image composition step of spatially combining a part of the image before being subjected to noise removal in the noise removal step with

B8
conc 12

a part of the image from which noise has been removed, to generate a composite image for display. Therefore, the viewer can see the images before and after noise removal at the same time to know, as an image, how much noise component is removed.

✓
Please amend the paragraph beginning on line 24 of page 7 as follows:

B9

According to a ninth aspect of the present invention, the image processing method defined in any of the first to sixth aspects further comprises an image decoding step of decoding an image code sequence to generate a decoded image; the noise detection step of performing noise detection using information included in the image code sequence; and the noise removal step of removing noise from the decoded image obtained in the image decoding step, on the basis of the result of the noise detection. Therefore, when performing noise removal on a decoded image obtained by decoding an image code sequence, the viewer can easily know how many pixels are subjected to noise removal.

✓
Please amend the paragraph beginning on line 10 of page 8 as follows:

B10

According to a tenth aspect of the present invention, in the image processing method defined in any of the first to sixth aspects, the noise is one of a blocking artifact and a ringing artifact. Therefore, most conspicuous noise included in an image can be removed, and the viewer can easily know how many pixels are subjected to noise removal.

✓
Please amend the paragraph beginning on line 16 of page 22 as follows:

B11

The image composition means 103 superimposes the image outputted from the image generation means 105 on the image outputted from the noise removal means 102. Assuming that figure 5(b) 5(a) shows an output image 203 outputted from the noise removal means 102 and figure 5(b) shows a text image 204 outputted from the image generation means 105, the image composition means 103 superimposes the text image 204 on the image 203 to generate a composite image shown in figure 5(c) to be output.